

RULE 63 (37 C.F.R. 1.63)
DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

As a below named inventor, I hereby declare that my residence, post office address and citizenship are as stated below next to my name, and I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the INVENTION ENTITLED BLADE COOLING the specification of which is attached hereto.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose all information known to me to be material to patentability as defined in 37 C.F.R. 1.56. I hereby claim foreign priority benefits under 35 U.S.C. 119/365 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate filed by me or my assignee disclosing the subject matter claimed in this application and having a filing date (1) before that of the application on which priority is claimed, or (2) if no priority claimed, before the filing date of this application:

PRIOR FOREIGN APPLICATION(S)			Date first Laid- Open or Published	Date Patented or Granted	Priority Claimed Yes No
Number	Country	Day/MONTH/Year Filed			
0227745.7	GB	28 November 2002			X

I hereby claim domestic priority benefit under 35 U.S.C. 120/365 of the indicated United States applications listed below and PCT international applications listed above or below and, if this is a continuation-in-part (CIP) application, insofar as the subject matter disclosed and claimed in this application is in addition to that disclosed in such prior applications. I acknowledge the duty to disclose all information known to me to be material to patentability as defined in 37 C.F.R. 1.56 which became available between the filing date of each such prior application and the national or PCT international filing date of this application:

PRIOR U.S. PROVISIONAL, NONPROVISIONAL, AND/OR PCT APPLICATION(S)			Status	Priority Claimed
Application No.(series code/serial no.)	Day/MONTH/Year Filed		pending, abandoned, patented	Yes No

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I hereby appoint the registered practitioners represented by **Customer No.: 20736** to prosecute this application and transact all business in the U.S. Patent and Trademark Office in connection therewith. Direct all correspondence to **Manelli, Denison & Selter PLLC at Customer No.: 20736**.

1. INVENTOR'S SIGNATURE: Roderick M Townes DATE: 1/10/03
Inventor's Name (typed) Roderick M Townes United Kingdom
First Middle Initial Family Name Country of Citizenship
Residence(City) Derby (State) Derbyshire
Post Office Address (Include Zip Code) 5 Amber Road, Allestree, Derby, DE22 2QB, England

2. INVENTOR'S SIGNATURE: _____ DATE: _____
Inventor's Name (typed) _____
First Middle Initial Family Name Country of Citizenship
Residence (City) _____ (State) _____
Post Office Address (Include Zip Code) _____

3. INVENTOR'S SIGNATURE: _____ DATE: _____
Inventor's Name (typed) _____
First Middle Initial Family Name Country of Citizenship
Residence (City) _____ (State) _____
Post Office Address (Include Zip Code) _____

4. INVENTOR'S SIGNATURE: _____ DATE: _____
Inventor's Name (typed) _____
First Middle Initial Family Name Country of Citizenship
Residence(City) _____ (State) _____
Post Office Address (Include Zip Code) _____

5. INVENTOR'S SIGNATURE: _____ DATE: _____

RECORDATION FORM COVER SHEET **PATENT APPLICATIONS & PATENTS ONLY**

TO THE HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS:

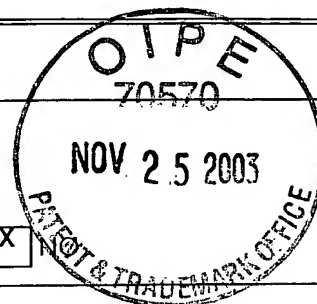
SIR: PLEASE RECORD THE ATTACHED ORIGINAL DOCUMENTS OR COPY THEREOF.

1. NAME OF CONVEYING PARTY(IES) (ASSIGNOR(S)):

1. TOWNES, Roderick Miles
 2.
 3.

4.
 5.
 6.

ADDITIONAL NAME(S) OF CONVEYING PARTY(IES) ATTACHED? ☐ YES



2. PARTY(IES) (ASSIGNEE(S)) RECEIVING INTEREST:

NAME: Rolls-Royce plc
 65 Buckingham Gate
 London SW1E 6AT
 England

ADDITIONAL NAME(S) & ADDRESS(ES) ATTACHED?



YES



NO

3. NATURE OF CONVEYANCE (DOCUMENT):

(Submit herewith only one document for recordation -- multiple copies of same Assignment signed by different inventors is one document)



ASSIGNMENT OF



WHOLE



PART INTEREST

EXEC. DATE: October 1, 2003



CHANGE OF NAME



VERIFIED TRANSLATION



SECURITY



MERGER



OTHER:

4. EXECUTION DATE(S) ON THE DECLARATION IF FILED HEREWITH: (NOTE: IF DATES ↑↓ DIFFER SEE ATTY!):

4.5 APPL. NO.(S) OR PAT NO.(S). OTHERS ON ADDITIONAL SHEET(S) attached?



YES



NO

A. PAT. APP. NO.(S) series code/serial no	M#	1ST INVENTOR if not in item 1	B. PATENT NO(S)	M#	1ST INVENTOR if not in item 1
	84712				

5. Name & Address of Party to Whom Correspondence Concerning Document Should be Mailed:

Manelli, Denison & Selter PLLC
 SEVENTH FLR.
 2000 M STREET N.W.
 WASHINGTON, D.C. 20036
 Att: Warren Taltavull

6. NUMBER INVOLVED:

APPLNS 1 + PATS: = TOTAL 1

7. AMOUNT OF FEE ENCLOSED: (Code 581)

ABOVE TOTAL X \$40 = \$ 40

5.5 ATTY DKT

84712

wwt

8. IF ABOVE FEE IS MISSING OR INADEQUATE CHARGE INSUFFICIENCY TO DEPOSIT ACCOUNT NUMBER: 50-0687

UNDER ORDER NO

84712

MATTER NO.

CLIENT REF.

dup. sheet not required

CLIENT NO.

MATTER NO.

9. STATEMENT AND SIGNATURE.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Signature

10. Total number of pages including this cover sheet, attachments and document (do not file dup. Cover sheet)

2

Attorney: **W. Warren Taltavull**

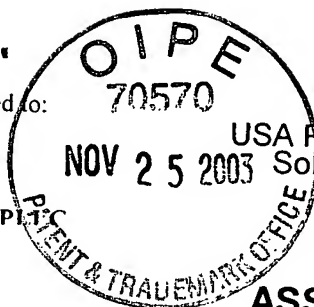
Reg. No. **25647**

Atty/Sec: TEL: (202) 261-1047

Date: **November 25, 2003**

Fax: (202) 887-0336

Please return signed/recorded to:

For Inventions made outside USA
executed with or after applicationManelli, Denison & Selter PLLC
2000 M Street N.W. 7th Floor
Washington, D.C. 20036Atty. Dkt. 73155
M#2547
Client Ref.

NONPROVISIONAL

ASSIGNMENT OF NONPROVISIONAL APPLICATION

NONPROVISIONAL

In consideration of the sum of Ten Dollars (\$10.00) and other good and valuable consideration paid to the undersigned, to wit:

INSERT
NAME(S) OF
INVENTOR(S)

(1) Roderick Miles Townes	(4)
(2)	(5)
(3)	[] X box if continued on page 2

the receipt and sufficiency of which are hereby acknowledged by the undersigned who at the request of, hereby sell(s), assign(s) and transfer(s) unto:

INSERT
NAME(S) OF
ASSIGNEE(S)
& ADDRESS(ES)

Rolls-Royce plc, a British Company of
65 Buckingham Gate
London
SW1E 6AT
England

(hereinafter designated "ASSIGNEE") the entire right, title and interest for the United States of America as defined in 35 U.S.C. 100, in the invention and all applications including any and all divisions, continuations, substitutes, and reissues thereof; and all resulting patents, known as

TITLE OF
INVENTION

BLADE COOLING

For which the undersigned executed an application for Letters Patent of the United States of America:

NOTE

(A) ☒ even date herewith

(COMPLETE)

(B) [] on _____

LINES A,B, AND/OR C)

(C) [] in U.S. Application No. _____ / _____ filed _____

AND the undersigned hereby authorize(s) and request(s) the United States Commissioner of Patents and Trademarks to issue said Letters Patent to the said ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives; the undersigned agree(s) that the attorney of record in said application shall hereinafter act on behalf of said ASSIGNEE.

AND the undersigned hereby agree(s) to testify and execute any papers for ASSIGNEE, its successors, assigns and legal representatives, deemed essential by ASSIGNEE to ASSIGNEE'S full protection and title in and to the invention hereby transferred.

NOTE → → The undersigned hereby authorize(s) Manelli, Denison & Selter PLLC, of the above address to insert hereon any further identification necessary or desirable for recordation of this document.

INVENTOR(S)

DATE SIGNED

WITNESSES

1) Roderick M Townes
Name: Roderick Miles Townes1/10/03[Signature]2) _____
Name: _____3) _____
Name: _____4) _____
Name: _____5) _____
Name: _____

IF ADDITIONAL INVENTORS, check box [] and continue on page 2.

RECORDATION FORM COVER SHEET
PATENT APPLICATIONS & PATENTS ONI



TO THE HONORABLE COMMISSIONER OF PATENT

102613014

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1. NAME OF CONVEYING PARTY(IES) (ASSIGNOR(S)):

1. TOWNES, Roderick Miles
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5.
6.

11-25-03

22154 U.S. PTO
10720333



ADDITIONAL NAME(S) OF CONVEYING PARTY(IES) ATTACHED? ☐ YES

☒ NO

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England

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☒ NO

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☒ ASSIGNMENT OF ☒ WHOLE ☐ PART INTEREST
☐ CHANGE OF NAME ☐ VERIFIED TRANSLATION
☐ SECURITY ☐ MERGER ☐ OTHER:

EXEC. DATE: October 1, 2003

10720333

4. EXECUTION DATE(S) ON THE DECLARATION IF FILED HEREWITH: (NOTE: IF DATES ↑↓ DIFFER SEE ATTY!):

4.5 APPL. NO.(S) OR PAT. NO.(S). OTHERS ON ADDITIONAL SHEET(S) attached? ☐ YES ☒ NO

A. PAT. APP. NO.(S) series code/serial no	M#	1ST INVENTOR if not in item 1	B. PATENT NO(S)	M#	1ST INVENTOR if not in item 1
	84712				

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SEVENTH FLR.
2000 M STREET N.W.
WASHINGTON, D.C. 20036
Att: Warren Taltavull

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Attorney: W. Warren Taltavull

Reg. No. 25647

Atty/Sec: TEL: (202) 261-1047

Date: November 25, 2003

Fax: (202) 887-0336

12/01/2003 SSITHIB1 00000004 10720333

11 FC:8021

40.00 DF

Please return signed/recorded to:

USA Patent Appln.
Sole or JointFor Inventions made outside USA
executed with or after applicationManelli, Denison & Selter PLLC
2000 M Street N.W. 7th Floor
Washington, D.C. 20036

Atty. Dkt.	73155	2547
	M#	Client Ref.

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OF NONPROVISIONAL APPLICATION****NONPROVISIONAL**

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INSERT
NAME(S) OF
INVENTOR(S)

(1)	Roderick Miles Townes	(4)	
(2)		(5)	
(3)		<input type="checkbox"/> X box if continued on page 2	

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INSERT
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ASSIGNEE(S)
& ADDRESS(ES)

Rolls-Royce plc, a British Company of
65 Buckingham Gate
London
SW1E 6AT
England

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TITLE OF
INVENTION**BLADE COOLING**

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NOTE

(A) ☒ even date herewith

(COMPLETE

(B) ☐ on _____

LINES A,B, AND/OR C)

(C) ☐ in U.S. Application No. _____ / _____ filed _____

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AND the undersigned hereby agree(s) to testify and execute any papers for ASSIGNEE, its successors, assigns and legal representatives, deemed essential by ASSIGNEE to ASSIGNEE'S full protection and title in and to the invention hereby transferred.

NOTE → → The undersigned hereby authorize(s) Manelli, Denison & Selter PLLC, of the above address to insert hereon any further identification necessary or desirable for recordation of this document.

	INVENTOR(S)	DATE SIGNED	WITNESSES
1)	<u>Roderick M Townes</u>	<u>1/10/03</u>	<u>[Signature]</u>
Name:	Roderick Miles Townes		
2)			
Name:			
3)			
Name:			
4)			
Name:			
5)			
Name:			

IF ADDITIONAL INVENTORS, check box ☐ and continue on page 2.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

JUNE 17, 2004

PTAS

MANELLI, DENISON & SELTER PLLC
W. WARREN TALTAUULL
2000 M STREET N.W., 7TH FLR.
WASHINGTON, D.C. 20036



102613014A

UNITED STATES PATENT AND TRADEMARK OFFICE NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 11/25/2003

REEL/FRAME: 014741/0817

NUMBER OF PAGES: 2

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).
DOCKET NUMBER: 84712

ASSIGNOR:

TOWNES, RODERICK MILES

DOC DATE: 10/01/2003

ASSIGNEE:

ROLLS-ROYCE PLC
65 BUCKINGHAM GATE
LONDON SW 1E 6AT, ENGLAND

SERIAL NUMBER: 10720333

FILING DATE:

PATENT NUMBER:

ISSUE DATE:

TITLE:

014741/0817 PAGE 2

LENELL MACKALL, SUPERVISOR
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS